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RULEMAKING ESTABLISHING	§	PUBLIC UTILITY COMMISSION
ELECTRIC WEATHERIZATION	§	
STANDARDS	§	OF TEXAS

COMMENTS OF EXELON GENERATION COMPANY, LLC

Exelon Generation Company, LLC ("Exelon")[1] respectfully files these Comments with the Public Utility Commission of Texas ("Commission" or "PUCT") responding to the staff of the Commission ("Staff") request for comments on questions.

Staff posed two questions, one related to a provider of electric generation service, and the other related to an entity providing transmission service. Exelon is limiting its comments to the first question, and its decision to address only the first question shall not be construed as Exelon taking any position with respect to the second question.

BACKGROUND AND INTRODUCTION

The Staff request relating to operation of electric generating facilities reads as follows:

> To fulfill the requirements of Texas Utilities Code § 35.0021(b), under what weather emergency conditions should the Commission require a provider of electric generation service in the Electric Reliability Council of Texas (ERCOT) power region to be able to operate its generation facilities? At a minimum, please address standards for temperature, icing, wind, flooding, and drought conditions. For each, please address whether the standard should vary by region or by type of generation facility. Please provide any relevant support for your recommendations, including existing or proposed standards in other jurisdictions, or related studies.

[1] Exelon Generation Company, LLC, through subsidiaries, owns 3,620 MWs of gas-fired capacity and 87 MWs of wind power in Texas. Exelon Generation Company, LLC also provides wholesale supply to a number of Texas cooperatives and municipalities.

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Texas Utilities Code § 35.0021(b) was added under Senate Bill 3 ("SB 3") which was passed by the Texas Legislature and signed into law by Governor Abbott on June 8, 2021, the full text of § 35.0021which appears below.

Sec. 35.0021. WEATHER EMERGENCY PREPAREDNESS.

(a) This section applies only to a municipally owned utility, electric cooperative, power generation company, or exempt wholesale generator that sells electric energy at wholesale in the ERCOT power region.

(b) The commission by rule shall require each provider of electric generation service described by Subsection (a) to implement measures to prepare the provider's generation assets to provide adequate electric generation service during a weather emergency according to reliability standards adopted by the commission. In adopting the rules, the commission shall take into consideration weather predictions produced by the office of the state climatologist.

(c) The independent organization certified under Section 39.151 for the ERCOT power region shall:

(1) inspect generation assets in the ERCOT power region for compliance with the reliability standards;

(2) provide the owner of a generation asset with a reasonable period of time in which to remedy any violation the independent organization discovers in an inspection; and

(3) report to the commission any violation.

(c-1) The independent organization certified under Section 39.151 for the ERCOT power region shall prioritize inspections conducted under Subsection (c)(1) based on risk level, as determined by the organization.

(d) The commission by rule shall require a provider of electric generation service described by Subsection (a) for a generation asset that experiences repeated or major weather-related forced interruptions of service to:

(1) contract with a person who is not an employee of the provider to assess the provider's weatherization plans, procedures, and operations for that asset; and

(2) submit the assessment to the commission and the independent organization certified under Section 39.151 for the ERCOT power region.

(e) The commission may require a provider of electric generation service described by Subsection (a) to implement appropriate recommendations included in an assessment submitted to the commission under Subsection (d).

(f) The independent organization certified under Section 39.151 for the ERCOT power region shall review, coordinate, and approve or deny requests by providers of electric generation service described by Subsection (a) for a planned power outage during any season and for any period of time.

(g) The commission shall impose an administrative penalty on an entity, including a municipally owned utility or an electric cooperative, that violates a rule adopted under this section and does not remedy that violation within a reasonable period of time.

RECOMMENDATIONS AND DISCUSSION

Exelon believes that the development of a reliability standard by the Commission, as contemplated by SB 3, is of critical importance to Texans. Rather than focus on the weather conditions under which a generating station should be expected to operate, Exelon recommends that the Commission take the following actions:

- Identify the desired level of reliability;
- Based on the desired level(s) of reliability and expected weather conditions, develop preparedness measures applicable to generation resources, considering factors including but not limited to season, region, type of resource, fuel source, and other resource characteristics;
- Establish a process for generation resources to file seasonal readiness plans, and auditing generation resources' adherence to the applicable preparedness measures; and
- Propose a means for compensating generation resources for the costs associated with enhanced preparedness measures.

First and Foremost, A Standard for Reliability Needs to Be Established

SB 3 states that weatherization shall occur based upon "reliability standards adopted by the commission". Most commonly, reliability standards are derived from the North American Electric

Reliability Corporation ("NERC") "one day in 10 year" Loss of Load expectation.[2] Although a reliability standard can arguably take different forms, the question nevertheless ought to start with the same principle of establishing the reliability metric for ERCOT on a system-wide basis. The all-important starting point is "What level of reliability are we trying to achieve?" Is the goal to limit the number of outages, or the duration of outages, or to plan for a certain minimum number of MW of generation to be available under certain conditions?

If the Commission desires to establish a reliability standard based on something other than the NERC "one day in 10 year" standard -- for example, a loss of load expectation of X hours during Y extreme weather condition over a given number of years -- that standard must be based on objective, historical data from the state climatologist, and should include input from ERCOT. Polling market participants will not yield a well-reasoned standard for the region, yet that appears to be what is contemplating by asking "[a]t a minimum, please address standards for temperature, icing, wind, flooding, and drought conditions." The question, posed in that form, does not reflect actual historical weather conditions, expected future weather conditions, the capabilities of current generation resources, or potential future resources. Nor does it contemplate the dynamics of the stated conditions; for example, a generation resource may be able to operate at a given temperature at a moment in time, but a sustained amount of time at that temperature may yield a different result.

The key objective should be to define what level of outages are acceptable within ERCOT on a yearly or multi-year basis, and then that standard can be applied consistently to guide decisions such as the preparedness measures that should be required based on the weather conditions in each region of Texas, and will allow for those weather conditions to evolve over time. The reliability standard can also be used as an objective guideline for market design and

[2] NERC Standard BAL-502-RF-03.

other changes. All the components – generator preparedness, transmission preparedness, and market design – should work together to meet the reliability objective, be it one day of outage in ten years or no more than X hours of outage during a Weather Emergency (however defined).

Once the reliability standard is defined, it will be important to understand the conditions within ERCOT, by region, in order to determine what preparedness measures should be taken in those locations. SB 3 requires that "the commission shall take into consideration weather predictions produced by the office of the state climatologist." Additional data from ERCOT regarding historical weather patterns by region, and the historical impact on various types of generation resources, by region and type, would also prove valuable. Gathering data and information from those experts would provide the Commission with the information needed to assess the electric grid's vulnerabilities to weather-related emergencies, based on historical patterns and to determine what preparedness measures should be taken in each region.

SB3 Requires the Commission to Define Preparedness Measures Needed to Meet the Reliability Standard

The question "[u]nder what weather conditions should the Commission require a provider of electric generation resource in the Electric Reliability Council of Texas (ERCOT) power region to be able to operate its generation facilities" appears to be geared toward establishing a performance-based standard. SB 3 did **not** attempt to establish a **performance** standard that sets temperature and other conditions under which a generator would have an absolute obligation to perform. Rather, SB 3 sought to establish a process to develop preparedness measures to meet a reliability standard so that there would not be widespread outages in Weather Emergencies. The language of the law further confirms that the goal of the law was to ensure that generation resources take measures needed to be able to meet a reliability standard even during weather emergencies:

> "The commission by rule shall require each provider of electric generation service described by Subsection (a) to implement measures to prepare the provider's generation assets to provide adequate electric generation service during a weather emergency according to reliability standards adopted by the commission."

The reason for SB 3's focus on preparedness is based on engineering realities. No single piece of equipment can or should be expected to operate 100% of the time. That is simply not reality. That difficulty is compounded when talking about a sophisticated piece of equipment with an array of components that all need to work together, which is the case for generation resources. A reliability standard that would mandate that a unit generate whenever the temperature is at X degrees, or between X and Y degrees, for example, would not be feasible, regardless of how much the owner/operator invested.

SB 3 calls on the Commission to establish preparedness measures for generation assets, in order to meet the applicable reliability standard during a weather emergency. Using data from the state climatologist and ERCOT would provide the best means of establishing a range of temperatures or other weather conditions under which an emergency condition for the ERCOT power grid may arise. The Commission should then develop measures to help generation resources prepare their units for operation under those conditions, which should be done by taking region, resource type, fuel source, and other resource characteristics into consideration. As part of developing those preparedness measures, the Commission should be mindful that potential conflicts exist between summer preparedness and winter preparedness. For example, equipment can be better insulated during extreme winter weather conditions by building protective structures or walls. However, Texas experiences close to 100 days of 100 degrees heat, and having equipment within structures traps heat, rather than dissipating heat as is needed during extremely high temperatures.

Just as weather patterns in various parts of the state may vary, capabilities of generation resources may vary. Staff's question appropriately acknowledges that preparedness measures may vary. The Commission must determine if all generation resources in a particular category should be subject to the same preparedness measures. For example, the Commission should consider whether older plants, or those that generate lower economic returns under existing market design and policies, should be subject to the same preparedness measures, or whether there may be some exemption for certain preparedness measures based on the individual unit characteristics and grid dynamics.

Additionally, preparedness measures must reflect the actual design parameters and limitations of a particular resource. For example, a generation resource built for 100 degrees may not be capable of operating in 110 degrees, even with investment in feasible upgrades. Yet the continued operation of a certain number of the 100-degree designed plants may not erode the ability to meet the reliability standard and may, in fact, contribute to resource diversity that also has its own reliability benefits.

This reality ties into the discussion below regarding costs for implementing the required preparedness measures and recovery of those costs, which must be a part of the conversation from the beginning.

The Commission Should Establish A Process To Evaluate Preparedness

The preparedness measures needed to meet various emergency conditions should be clearly articulated, with generation resources being audited by ERCOT based on whether they have performed these preparations, per SB 3 – not based on performance during extreme weather conditions. SB 3 gives the Commission the license and the mandate to review generation resources, which is currently more informal. Exelon recommends that the Commission build upon the existing process by establishing the following:

- Require that every generation resource go through a site audit performed by ERCOT, or a 3rd party expert retained by the PUCT. The initial site audit will establish a baseline standard for the preparations that the specific generation resource should be taking for winter, and for summer, utilizing lessons learned by the industry from the events of Winter Storm Uri, among others.

- Instruct ERCOT to perform annual spot checks, which would include review of the generation resources' preparations; provide recommendation(s), if any; and give ERCOT an opportunity to ask questions about how the resource would handle certain situations, etc.
  - A generation resource that fulfills the preparedness requirements would be given a certification of compliance;
  - A generation resource that receives recommendations would be given a reasonable timeframe for compliance. Once the preparedness requirements were complete, the resource would be given certification of compliance.

- Review the reliability standard, and the process for recommending and evaluating preparedness measures, in a Commission proceeding every 2-3 years, to assess their adequacy.

Costs and Cost Recovery Must Be Considered

Establishing requirements that will impose costs on generation resources, without developing a comprehensive framework under which those expenses can be recovered, could have the opposite effect on reliability than what SB 3 was trying to achieve. That is, imposing potentially costly requirements on generation resources with fines up to $1 million per violation,

per day, and leaving discussion of the associated costs for another day, will likely cause certain generation resources to conclude that participation in the ERCOT market does not make economic sense when weighing the costs and risks, causing resources to prematurely retire or to never get built. Such an outcome would exacerbate reliability issues on an isolated electric grid that is showing signs of being increasingly strained (even in non-peak months),[3] counter to the legislative mandate.

There is support for funding weatherization both at the Texas state government level and at NERC. Governor Abbot requested[4] that funding be included in weatherization: "The Governor is asking the Legislature to mandate the winterization of Texas' power system and for the Legislature to ensure the necessary funding for winterization." Additionally, a report[5] prepared for NERC recommends cost recovery. "In the case of ERCOT, which does not own the generators in its footprint, consideration needs to be given to ensuring that there is an adequate cost recovery mechanism in place for reliability measures taken by the generators at ERCOT's direction." The Commission should refrain from issuing what amounts to an unfunded mandate to the generator community. It should clearly define the means by which generators may recover the investments that they make to prepare for extreme weather events and to meet the reliability standard that the Commission defines. Eliminating uncertainty as to the funding for weatherization measures is the most expedient way to ensure improved generator reliability in ERCOT.

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[3] In 2021, OCNs were issued for operating days January 11, February 11 – February 15 (moved to EEA, with return to normal February 19), March 15, April 8, April 11, April 12, April 13, April 14, June 14, June 15, and June 16.
[4] https://gov.texas.gov/news/post/governor-abbott-declares-power-system-winterization-related-funding-as-emergency-items-provides-update-on-winter-weather-response
[5] https://www.ferc.gov/sites/default/files/2020-04/08-16-11-report.pdf

CONCLUSION

For the foregoing reasons, Exelon respectfully requests that the Commission develop a framework for the rulemaking, and ultimately rules, consistent with the above.

Respectfully submitted,

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On behalf of Exelon Generation Company, LLC